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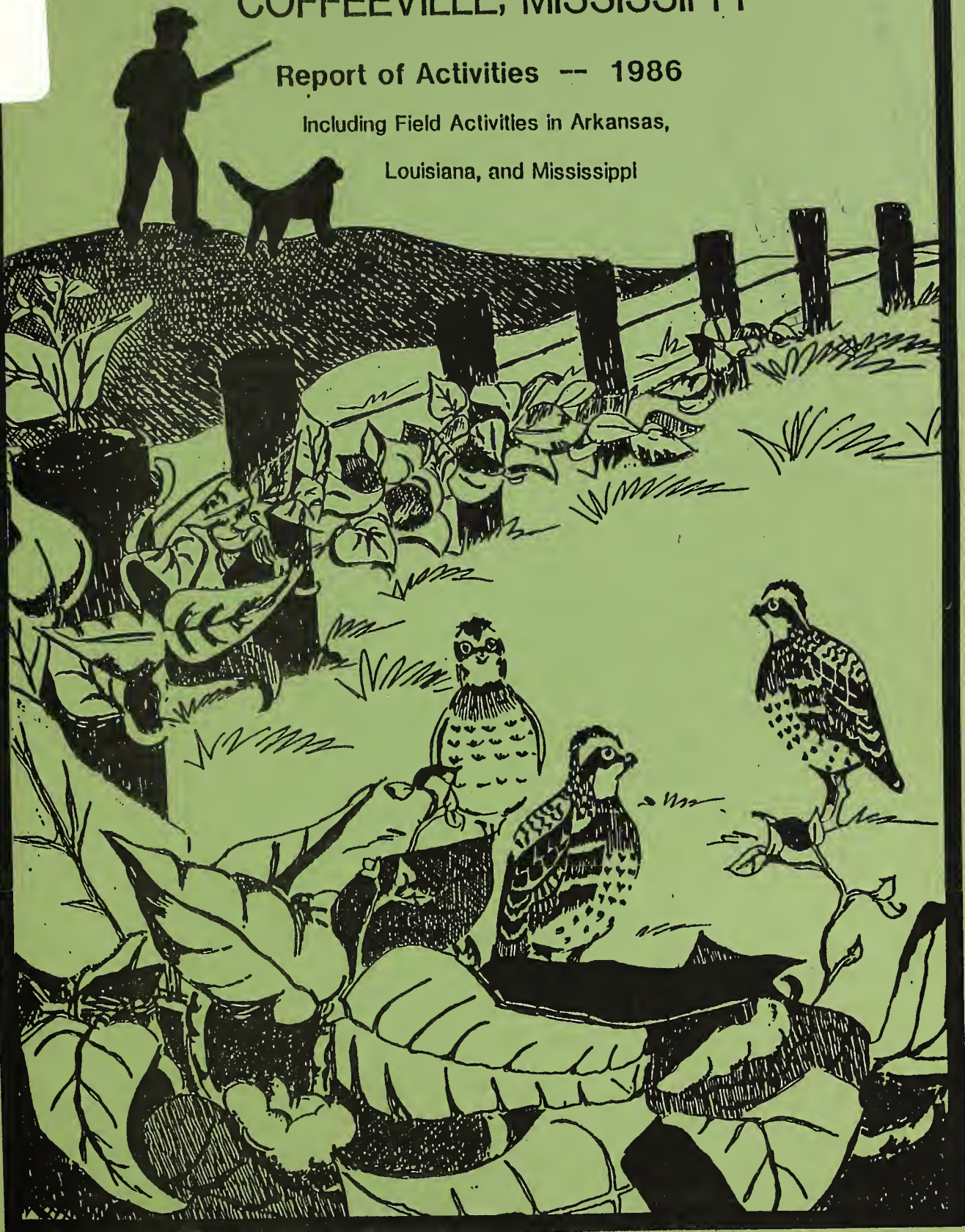
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COFFEEVILLE PLANT MATERIALS CENTER COFFEEVILLE, MISSISSIPPI

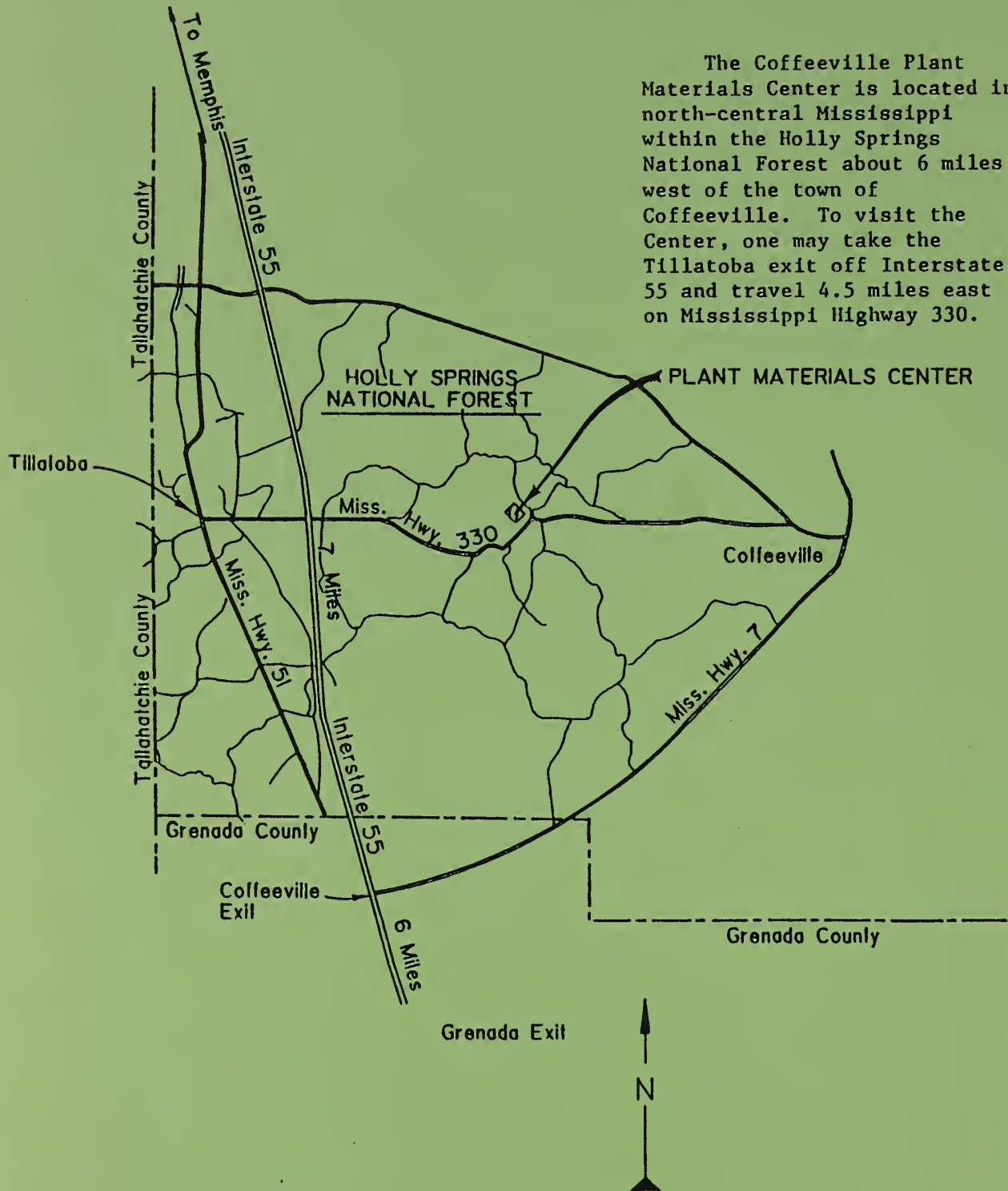
Report of Activities -- 1986

Including Field Activities in Arkansas,
Louisiana, and Mississippi



Location

The Coffeeville Plant Materials Center is located in north-central Mississippi within the Holly Springs National Forest about 6 miles west of the town of Coffeeville. To visit the Center, one may take the Tillatoba exit off Interstate 55 and travel 4.5 miles east on Mississippi Highway 330.



COFFEEVILLE PLANT MATERIALS CENTER

COFFEEVILLE, MISSISSIPPI

Report of Activities

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INTRODUCTION

The Coffeerville Plant Materials Center (PMC) is part of a network of 25 centers operated by the Soil Conservation Service. The National Plant Materials program began soon after the SCS was founded because the need to have better plants was recognized at that time. The purpose of the plant materials program is to select improved plant cultivars and develop better methods for the prevention of soil erosion using plants. Nationwide, the plant materials program has participated in the testing and release of over 250 varieties of superior plants. Many of these are well adapted to the South.

The Coffeerville PMC began as part of the much larger Flood Prevention Seed Unit on August 8, 1960. During its 25 years of operation the Coffeerville PMC has tested over 6000 accessions of plants, many of which were later released by various PMCs.

The year 1986 was a high point in the history of the Coffeerville PMC. The Center participated in the release of three varieties for wildlife conservation. They are:

- 1) 'Quail Haven' reseeding wildlife soybean, a vining annual legume that came to the United States from China. It produces up to 1200 lbs./acre of small seeds that mature in late October or November. Many hard seeds overwinter on the ground and germinate the following spring. Besides providing food for quail and dove, it may be used for soil improvement and for hay.

- 2) 'Gobbler' sawtooth oak produces many acorns that are relished by turkey and deer. It forms an attractive medium-size tree that may be used for shade.

- 3) 'Ellagood' autumn olive holds fruit longer than other varieties providing food for a variety of birds into the winter. The shrub may also be used for informal hedges, barriers, and windbreaks. Although not a legume, it fixes nitrogen and may be used for surface mine reclamation.

SOILS

Most work at the PMC is conducted in the nearly-level bottom land on Oaklimeter silt loam. These soils are naturally very acid and wet, but they can be very productive with proper water control and drainage. Loring and Grenada silt loams with fragipans dominate the slopes.

WEATHER

The year 1986 began with much lower rainfall and higher temperatures than normal. Rainfall for January through April was only 8.51 inches compared to 15.62 the previous year. Only twice in January and three times in February did the temperature drop below 20 degrees, but these cold snaps were enough to damage tender vegetation that had not become hardened to the cold. Twenty-six days in January and 18 in February had above average temperatures.

The dry spell was broken in mid-May when about 4.5 inches of rain came in a period of 8 hours. May and June with 14.9 inches of rain were then followed by a dry summer with approximately 7 inches of rainfall. Then in October and November 21.27 inches of rainfall brought the yearly average back to normal.

Frost came about two weeks later than normal, and the first freeze did not come until November 13, but this was considerably earlier than the year before when the first freeze came December 1.

TABLE 1. TEMPERATURE AND PRECIPITATION AT COFFEEVILLE PLANT MATERIALS CENTER

Weather Summary

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
<u>Temperature (°F)</u>														
Extreme 1986	High	70	71	80	82	90	96	102	97	94	90	68	62	102
	Low	13	12	20	33	46	65	71	51	56	40	27	26	12
Average 1986	High	55	56	67	73	77	88	94	87	86	71	57	49	72
	Low	31	39	41	48	60	71	76	67	67	53	45	35	53
Average 1975-1985	High	44	51	61	70	77	88	91	89	83	71	60	49	69.5
	Low	28	34	43	51	61	69	74	72	64	50	42	31	51.5
<u>Precipitation (in.)</u>														
Total	1986	0.29	2.43	3.28	2.51	5.03	9.87	1.27	3.76	2.03	6.67	14.60	4.33	56.07
Average 1969 - 85		5.29	4.58	6.97	5.84	5.62	4.46	4.31	3.24	4.24	3.53	5.70	5.99	59.77

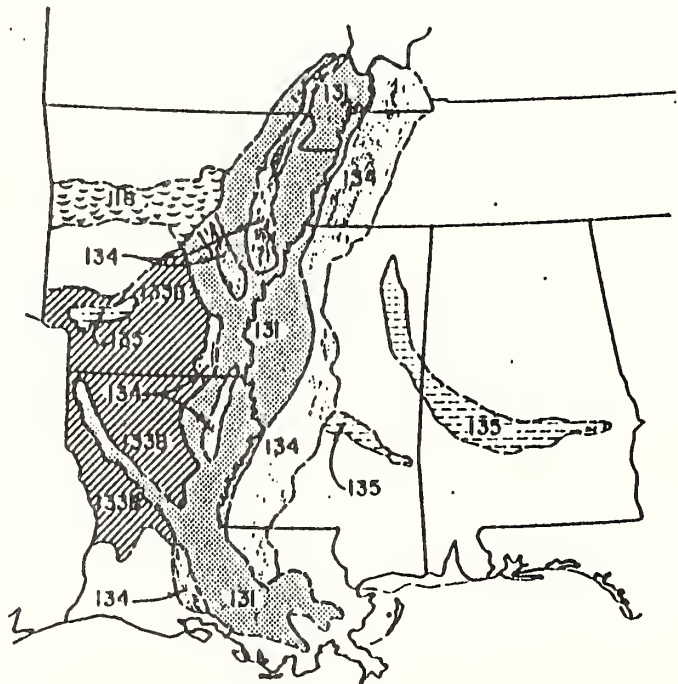
SERVICE AREA

Five MLRAs are in the Coffeenville PMC Service Area. They are:

- MLRA 118: ARKANSAS VALLEY AND RIDGES
- MLRA 131: SOUTHERN MISSISSIPPI VALLEY ALLUVIUM
- MLRA 133B: WESTERN COASTAL PLAIN
- MLRA 134: SOUTHERN MISSISSIPPI VALLEY SILTY UPLANDS
- MLRA 135: ALABAMA, MISSISSIPPI, AND ARKANSAS BLACKLAND PRAIRIE

The PMC service area covers a major portion of Arkansas, Louisiana, and Mississippi. Significant areas of Alabama and Tennessee are included. Climate is humid and temperate. Rainfall is approximately 50 inches for most of the area. Droughts in late summer and autumn are common. Temperature increases from north to south. Summer temperatures of 90 to over 100 F are commonly accompanied by high humidity. Winters are mild in the southern part. Snowfall accumulations are common only in the north. Soil, vegetation, topography, and land usage are closely related to the major land resource areas (MLRA).

SERVICE AREA FOR COFFEEVILLE PMC



When fully operational, the new PMC at Booneville, Arkansas will service MLRA 118.

LONG RANGE PROGRAM

Conservation problems for the PMC service area are identified in the PMC Long-Range Program. Once the priorities have been established by the State Conservationists' Advisory Committee, the PMC develops project plans to solve the problems given the highest priority. Problems related to CROPLAND EROSION have been given the highest priority. Medium priority has been given to problems related to pasture and rangeland, woodland, and critical area.

MAJOR ACTIVITIES IN 1986

In addition to pursuing its basic task of testing and selecting unique and improved plants for conservation, the Coffeenville Plant Materials Center (PMC) is frequently called upon to provide service in its local community as well as to the nation. These services range from conducting tours at the center to providing plant materials and information to research institutions. Over 200 people visited the center in 1986 including nine from Kenya, Burma, and Australia. A field day was given for state and federal agricultural leaders in Mississippi with over 70 persons in attendance, and 17 teachers met at the PMC for a conservation workshop. Also included were a ladies' tour and an area tour to familiarize SCS employees, many of whom had never seen the center, with the plant materials program.

The basic Plant Materials Program includes a series of seven steps. It is designed to determine the adaptiveness and performance of the plants and to insure an adequate supply of materials. From start to finish, the process requires about 15 years.

STEP 1: ASSEMBLY

After problems and priorities have been determined, the PMC begins to assemble plant materials that have potential to solve high priority problems. Plant collections may come from a variety of sources, both foreign and native. At the PMC, each collection is given a unique accession number for identification throughout the testing program.

In 1986 emphasis was placed on the assembly of cool-season plants to use on cotton and soybean land that is responsible for much erosion. The National Plant Materials Center was asked to assist in obtaining several accessions of bur clover and medics (especially Medicago arabica and M. minima) from foreign sources.



Sensitive Plant
Mimosa strigillosa



Spotted Burclover
Medicago arabica

Also several vegetative specimens were collected to expand weak assemblies of sensitive plant (Mimosa strigillosa) and cold-hardy bahiagrass (Paspalum notatum).

STEP 2: INITIAL EVALUATION

After the seeds or plants arrive at the Plant Materials Center and are given an accession number, they are planted in rows or small plots. Accessions in each assembly are planted in groups so an easier and more meaningful comparison can be made. Periodically PMC personnel evaluate the plants for vigor, seed production, resistance to diseases and insects, and tolerance to heat drought, and cold. Also, the plants are measured and dates of flowering and maturity recorded.

New Initial Evaluations

Initial evaluations were begun in 1986 for three major assemblies, sensitive plant, prostrate lespedeza, and heat-tolerant crownvetch (Coronilla varia). Accessions of bahiagrass were started in the greenhouse for planting in 1987.

Other Major Assemblies

Upright Lespedezas (Lespedeza sp.)
Trailing Wild Bean (Strophostyles sp.)
Purpletop (Tridens flavus (L.) A. Hitchc.)
Beaked Panicgrass (Panicum anceps Michx.)

Completed Evaluations

Technical reports were written in 1986 for initial evaluations of partridgepeas and Illinois bundleflowers completed in the previous year.

Copies of technical reports may be obtained by writing the Coffeeville PMC or the Plant Materials Specialist at the Federal Building in Jackson, Mississippi.

Partridgepeas (Cassia fasciculata Michx. and C. nictitans L.)

These are herbaceous, warm-season, annual legumes native to much of United States east of the Rocky Mountains. Different forms of both species exist and have been recognized as varieties by plant taxonomists.

Partridgepeas frequently occur in dry, open fields and roadsides and are reputed to be excellent sources of food for upland gamebirds. They are frequently among the first plants to colonize infertile, dry, or disturbed soils and have potential for use on surface mines, roadbanks, and similar bare or infertile areas where their nitrogen-fixing ability could enhance the establishment of additional vegetation.

Of the 119 accessions in the assembly, the following were considered to have merit. They were:

- 421728 (C. mimosoides) - From Puerto Rico through Americus PMC
436819 (C. fasciculata) - Collected in Falls Co., TX by Richard Oliver
9021655 (C. fasciculata) - Collected in Crawford Co., AR by Wayne E. Weese
9021660 (C. fasciculata) - Collected in Columbia Co., AR by Bobby J. Cook
9021666 (C. fasciculata) - Collected in Crittenden Co., AR by J. L. Reid
9028367 (C. fasciculata) - Collected in Ashley Co., AR by Louis Jacks
9028375 (C. fasciculata) - Collected in Lee Co., AR by Hardy Cloutier
9028380 (C. fasciculata) - Collected in Sharkey Co., MS by Ike C. Presley
9028390 (C. nictitans) - Collected in Lincoln Co., AR by B. Whitehurst
9028396 (C. fasciculata) - Collected in Dallas Co., AR by Earl D. Chapman
9028414 (C. fasciculata) - Collected in Miller Co., AR by Dee M. Vanderburg
9028449 (C. fasciculata) - Collected in Mississippi Co., AR by Levell Foote, Jr.
9028475 (C. fasciculata) - Collected in Rapides Parish, LA by Andrew C. Irvin
9028480 (C. fasciculata) - Collected in West Carroll Par., LA by Mike May
9028482 (C. fasciculata) - Collected in W. Baton Rouge Par., LA by S. Anderson
9028920 (C. nictitans) - Collected in Faulkner Co., AR by Kenneth A. Croft

Illinois bundleflower (Desmanthus illinoensis (Michx.) MacM.)

This is a herbaceous, warm-season, perennial legume. It is native to prairies and flood plains from Alabama to Texas northward to Indiana and North Dakota and is most abundant in neutral or alkaline soils. It contributes to the fertility of the native grasslands by fixing nitrogen. It has been widely reputed to be an excellent source of food for wildlife, but its value as food for upland gamebirds is questionable. It occurs often on dry roadsides or disturbed soils and has potential for use on surface mines, roadbanks, and similar bare or infertile areas where its ability to fix nitrogen may enhance growth of additional vegetation.

Of the 60 accessions in the assembly, the following were considered to have merit. They were:

- 421094 - Collected in Caddo County, OK by Tom Wilson
- 421097 - Collected in Woods County, OK by Jim Altom
- 421098 - Collected in Canadian County, OK by Duane Crider
- 436882 - Collected in Rogers County, OK by P. J. Boyles
- 436890 - Collected in Murray County, OK by Earl G. Weisner
- 436897 - Collected in Lincoln County, OK by David Legg
- 9017600 - Collected in Ft. Bend. County, TX. by W. E. Bohmfalk
- 9028469 - Collected in Howard County, AR by Mickey Evans
- 9028953 - Collected in Lee County, MS by James Wolfe

STEP 3: INITIAL OR SMALL SCALE INCREASE

When an initial evaluation has been completed and accessions with superior qualities have been selected, they are increased in small plots to provide material for additional testing. In 1986, no accessions were in small scale increase other than those in advanced evaluations. After initial evaluations of partridgepeas were completed, no seeds of some of the better accessions remained so additional collections were requested in 1986 from the original source for a 1987 initial increase.

STEP 4: ADVANCED TESTING AND FIELD EVALUATION PLANTINGS

When sufficient material has been increased, the accessions selected as superior in initial evaluations are tested for ability to solve one or more conservation problems in the PMC Long Range Program. The selected accessions are compared with standard plants that are currently considered the best to solve the problem.

In 1985 the Coffeeville PMC joined the PMC at Brooksville, FL in the advanced evaluations of giant reed (Arundo donax L.). Of the four accessions at the Coffeeville PMC, PI-432432 was considered the best. The Brooksville PMC had 5 accessions that were better in Florida.

No new accessions were selected for advanced testing. Evaluations continued on the other candidates for release which were:

Afghan reedgrass (Calamagrostis pseudophragmites, PI-220584)
Goat willow (Salix caprea, PI-434284)
Gilg willow (Salix gilgiana, 9004882)
Erect willow (Salix rigida, 9004885)
Prairie willow (Salix humilis, 9004886)



Advanced testing often includes off-center Field Evaluation Plantings (FEP) to test plants where soil or other conditions strongly contrast with those at the center. These are conducted as a part of the PMC program or in conjunction with other plant materials activities.

As the evaluations progress, a technical report will be prepared to inform plant specialists of the progress. The important decisions will be described in future editions of this report.

STEP 5: FIELD OR LARGE SCALE INCREASE

Accessions that are candidates for release are grown in large quantities for the final stages of evaluation. Some of the material continues to be used in advanced evaluations or FEPs, but much is destined for field plantings. Increases of common and 'Appalow' sericea lespedeza were grown in 1986 for field plantings. Also a large quantity of 'Quail Haven' reseeding soybean, released in 1986, was produced to provide seed for commercial growers.

STEP 6: FIELD PLANTINGS

Prior to field planting, a long-range plan is prepared for the orderly testing of the promising plant. The plantings are usually scheduled over a number of years in a variety of soil and climatic conditions, if possible. Field plantings are coordinated by Plant Material Specialists who generally serve more than one state, and each state may test plants from several PMCs. The test sites are provided by conservation district cooperators, mining companies, local governments, and others. The plantings and evaluations are usually conducted through SCS field offices.

The last step in evaluating a candidate for release by a PMC is the field planting (not to be confused with the Field Evaluation Planting or FEP). In field plantings, the test plant is compared to standards (best plants currently available for that purpose) in actual field situations. At this point, the test plants are still in the experimental stage and are not to be harvested and sold before they are formally released.

STEP 7: CULTIVAR RELEASE AND USE

When data from all of the previous steps have been assembled, they are presented to the cooperating agencies and release committee. If they agree that the plant is superior, the plant is cooperatively named and released for commercial production and use. The Coffeetown PMC has responsibility for maintaining breeder and foundation blocks of its releases, and does not supply plant material to the general public. It only maintains small "foundation" blocks to provide genetically pure stock to qualified growers who supply the public.

In 1986, MS-128 reseeding soybean was released jointly by the SCS and Mississippi State University as 'Quail Haven' reseeding wildlife soybean. Adverse weather conditions resulted in failures of most commercial increases. There was considerable interest and the scarce seeds were selling for \$5.00 per pound.

In addition to 'Quail Haven', the Coffeetown PMC currently maintains breeder stock of:

- 'Meechee' arrowleaf clover used for forage
- 'Chiwapa' Japanese millet for wildlife
- 'Halifax' maidencane for stream channel and shoreline stabilization

Growers who wish to grow certified seeds should contact Foundation Seed Stock at Mississippi State University where a supply of foundation seed may be obtained.

FIELD ACTIVITIES IN ARKANSAS, LOUISIANA, AND MISSISSIPPI

FIELD EVALUATION PLANTINGS

Active Field Evaluation Plantings (FEP) which were begun in Arkansas, Louisiana, and Mississippi (The Delta States) in previous years were continued. Some were completed and several more are to be finished in 1987. Only one new FEP was started for surface mine reclamation in Louisiana.

Marshhay or Saltmeadow Cordgrass (Spartina patens (Ait.) Muhl.)

Evaluations were concluded in 1986 for these FEPs started in 1983 and 1984. They were made to test the performance of selected accessions of marshhay cordgrass on eroded areas of coastal marshes and dunes (CAED), waterways (CACW), and salt damaged sites (SALT) associated with oil field operations. Plantings were made across the South including nine in the Delta States as follows:

- CAED - Cameron Parish, LA at Johnson's Bayou (1983)
- CAED - Terrebonne Parish, LA at Fourchon Beach (1983)
- CAED - Hancock Co., MS north of Waveland (1983)
- CAED - Jefferson Parish, LA at Grand Isle St. Park (1984)
- CACW - West Carroll Parish, LA south of Oak Grove (1984)
- CACW - Wilkinson Co., MS at oil waste site near Centreville (1984)
- SALT - Union Co., AR in the Smackover oil field (1983)
- SALT - Smith Co., MS at abandoned oil well near Taylorsville (1983)
- SALT - Wilkinson Co., MS in oil field west of Rosetta (1984)

These plantings were made to assist the Plant Materials Centers at Americus, GA and Brooksville, FL determine which of their better selections should be released. Three plants, including PI-421237 released in 1986 as 'Avalon' saltmeadow cordgrass from the PMC at Cape May, NJ, were included as standards. In the course of these trials, PI-421238 from the Cape May PMC and PI-415141 from the Brooksville PMC appeared to be superior to Avalon in the South and the three are now being further evaluated in Field Plantings.

Bitter Panicum (Panicum amarum Ell.)

Three FEPs were made in 1983-84 in Louisiana at the same locations as Marshhay cordgrass FEPs. These evaluations were concluded in 1986 and the data are being combined with those from other plantings by the Brooksville PMC to select a superior variety for coastal dune stabilization.

Arkansas Blackland Prairie

This planting made in 1984 included a management trial and an adaptation trial. All evaluations in the management trial were concluded in 1986 and the others are due for conclusion in 1987. The management trial was made in a pasture near Tolette, AR to select species for grazing that would perform well with low levels of fertility. It consisted of 7 treatments with 45 accessions each. The best species for grazing the first three years appeared to be Caucasian bluestem with Plains bluestem being second. It appeared that native grasses, big bluestem, little bluestem, switchgrass, and indiangrass, would perform well in mixtures but were slow to get a good stand. Technical reports were prepared in 1986 describing performances of the species but data were inadequate to substantiate the selection of the best cultivar of the native species. Additional reports to make these determinations are expected to be written in 1987.

Surface Mine Reclamation

Cooperative plantings with the Mississippi Department of Natural Resources (Bureau of Geology) were made in 1985 to select commercially available plants that could give adequate cover on harsh sites where the landowner cannot afford to use standard methods. In the spring, 24 warm-season varieties with 4 replications were planted at six locations in Mississippi. A similar planting was started in Louisiana in 1986. Plantings of woody and cool-season varieties were also made at the Crystal Springs and Hattiesburg sites. The plantings were made on a wide range of materials as follows:

- Sand near Crystal Springs, MS
- Silty clay/gravel near Crystal Springs, MS
- Sand near Hattiesburg, MS
- Silty clay/gravel near Hernando, MS
- Fuller's earth near Ripley, MS
- Silt screenings from mining near Ripley, MS
- Sand north of Denham Springs, LA

Evaluations are still in progress and, it is too early to draw conclusions from these trials.

FIELD PLANTINGS COMPLETED

Field Plantings are made to gather information on candidates for release from PMCs. After release, plantings may be made to gather more information when the range of adaptation for the plants is not clearly known.

Analysis of data for completed field plantings is incomplete. Technical reports are scheduled to be written in 1987 for them. Since the field planting data have not been fully analyzed, the following comments concerning the varieties under consideration are impressions gathered from observations made in PMC and FEP plantings as well as in field plantings.

'Quail Haven' Reseeding Soybean (Glycine soja, PI-163453, MS-128)

This plant was released for wildlife use (WLDF) by the Coffeenville PM 1986. Field plantings using 'Bobwhite' as a standard were begun in 1986 and continued through 1986. Bobwhite is also a vining type of soybean released for wildlife by the Elsberry (MO) PMC in 1975. Field plantings were made at the following locations.

STATE	AREA	FIELD OFFICE	MLRA	COOPERATOR	YEAR	PURPOSE
AR	6	Camden	133B	AR Game & Fish	80	WLDF
AR	4	Conway	118	AR Game & Fish	81	WLDF
AR	7	Monticello	133B	Daniel, C.	81	WLDF
AR	6	Arkadelphia	135	Ross Foundation	82	WLDF
AR	7	Star City	131	Johnson, V.	83	WLDF
AR	3	Ozark	117	Kinney, D.	83	WLDF
AR	1	Harrison	116A	Harris, D.	83	WLDF
AR	2	Des Arc	117	AR Game & Fish	83	WLDF
LA	2	Alexandria	133B	Camp Beauregard	80	WLDF
LA	2	Marksville	131	Newton, B.	80	WLDF
LA	2	Oberlin	-	Beeson, W.	80	WLDF
LA	1	Mansfield	133B	Johnson, B.	83	WLDF
LA	1	Winnsboro	131	Earle, B.	83	WLDF
LA	1	Shreveport	133B	Caddo Detn. Cen.	83	WLDF
MS	4	Booneville	133A	Bellamy, B.	80	WLDF
MS	4	Booneville	135	Bellamy, B.	80	WLDF
MS	6	Gulfport	133A	King, J.	81	WLDF
MS	1	Greenville	131	Yazoo Wldf. Ref.	81	WLDF
MS	1	Greenwood	131	Stainback, R.	82	WLDF
MS	1	Greenwood	131	Saunders, G.	84	WLDF
MS	4	West Point	135	Warren, L.	84	WLDF
MS	6	Hattiesburg	133A	Roberts, T.	84	WLDF
MS	4	Starkville	135	Herring, D.	84	WLDF
MS	6	Decatur	135	Bonds, L.	84	WLDF
MS	5	Philadelphia	-	Brown, H.	84	WLDF

Quail Haven was considered superior for use in the South because it produces more seeds and they mature about a month later - about November 1 instead of October 1 for Bobwhite. Later maturity enables quails and doves to have food later into the winter when food is scarce.

'WW-477' Yellow Bluestem (Bothriochloa ischaemum, PI-301477)

This plant was tested to gather information concerning the adaptation of this cultivar being considered for release by the Southern Great Plains Experiment Station in Woodward, Oklahoma. Field plantings for roadside erosion control (CARD) and for pasture (PAST) using two other varieties of yellow bluestem, 'King Ranch' and 'Plains', as standards for comparison. Additional plantings were planned but seeds were available only in 1982. Field plantings were made at the following locations.

STATE	AREA	FIELD OFFICE	MLRA	COOPERATOR	YEAR	PURPOSE
AR	3	Clarksville	118	Hurley, B.	82	CARD
MS	2	Calhoun City	133A	Dist. 3 Superv.	82	CARD
AR	1	Melbourne	116A	Shaw, C.	82	PAST
LA	2	Alexandria	133B	US Forest Service	82	PAST
MS	4	West Point	135	Waide, C.	82	PAST

Plains appears to be the best variety overall. Although WW-477 is more vigorous and appears superior to the other varieties the first summer, it is damaged by freezing. King Ranch is also damaged but not as severely. The major obstacle in using all of the yellow bluestems was the lack of drills that could sow the chaffy seeds. Generally bermudagrass and bahiagrass perform better, except perhaps in the Blackland Prairie (MLRA 135), if proper amounts of fertilizer are used.

'Comanche' Partridge Pea (Cassia fasciculata, PI-421727)

This plant was released by the Knox City (TX) PMC in 1985. Field plantings of this cultivar began in the Delta States in 1979 and continued until none survived in 1986. A 'common' commercial source was used as a standard when available. Plantings were made to fix and provide nitrogen to grasses in waterways (CACW), to reclaim surface mined area (CASM), and for wildlife. Field plantings were made at the following locations.

STATE	AREA	FIELD OFFICE	MLRA	COOPERATOR	YEAR	PURPOSE
LA	3	Lake Charles	150	Drigle, B.	82	CACW
LA	2	Alexandria	133B	US Forest Service	83	CACW
MS	4	Booneville	133A	Hughes, H.	81	CACW
MS	5	Jackson	134	Kirkland, B.	84	CACW
AR	3	Clarksville	118	Hurley, B.	82	CASM
AR	3	Paris	118	Booneville HS	82	CASM
AR	3	Ozark	118	Kinney, D.	83	CASM
AR	3	Clarksville	118	Nelson, J.	83	CASM
AR	4	Conway	118	AR Game & Fish	83	WLDF
AR	1	Harrison	116A	Harris, D.	83	WLDF
AR	6	Arkadelphia	135	Ross Foundation	85	WLDF
LA	2	Alexandria	133B	Camp Beauregard	79	WLDF
LA	1	Winnsboro	134	Hilliard, L.	79	WLDF
LA	1	Benton	131	Rich, B.	80	WLDF
LA	2	Alexandria	133B	Camp Beauregard	80	WLDF
LA	2	Alexandria	133B	Lavy, B.	82	WLDF
LA	1	Winnsboro	131	Earle, B.	83	WLDF
LA	2	Opelousas	131	White, I.	83	WLDF
LA	1	Vidalia	131	Huntington Inc.	84	WLDF
MS	1	Greenville	131	Yazoo Wild. Ref.	81	WLDF
MS	6	Gulfport	133A	Laird, J.	82	WLDF
MS	1	Greenville	131	Yazoo Wild. Ref.	83	WLDF
MS	3	Batesville	134	Vaughn, H.	83	WLDF
MS	4	West Point	135	Waide, C.	85	WLDF

Commanche does not appear superior in the Delta States to local ecotype and is possibly not as well adapted as some. None of the partridge peas performed well in waterways. They did perform well in surface mines and wildlife plantings when planted before the weather became hot and dry. Being a pioneer type of plant, the partridge peas would usually last for no more than three years before declining due to competition by other plants.

'Aztec' Maximilian Sunflower (Helianthus maximiliana, PI-421845)

This plant was released by the Knox City PMC in 1978. It was placed in field plantings in the Delta States because its range of adaptation was not fully known. 'Prairie Gold' maximilian sunflower, another 1978 release from the Manhattan (KS) PMC, was used as a standard for comparison. Field plantings were begun in 1979 and continued through 1986. Field plantings were made at the following locations.

TATE	AREA	FIELD OFFICE	MLRA	COOPERATOR	YEAR	PURPOSE
AR	1	Melbourne	116A	Herold, D.	80	WLDF
AR	1	Harrison	116A	Harris, D.	82	WLDF
AR	4	Conway	118	AR Game & Fish	82	WLDF
AR	2	Des Arc	117	AR Game & Fish	83	WLDF
AR	1	Marshall	117	Ashley, H.	84	WLDF
AR	6	Arkadelphia	135	Ross Foundation	85	WLDF
LA	2	Alexandria	133B	Camp Beauregard	79	WLDF
LA	1	Vidalia	131	Burley, B.	80	WLDF
LA	1	Ruston	133B	Jones, R.	80	WLDF
LA	1	Mansfield	133B	Johnson, B.	84	WLDF
LA	2	Ville Platte	134	Chicot St. Park	84	WLDF
LA	3	New Orleans	131	New Orleans Parks	84	WLDF
MS	1	Greenville	131	Yazoo Wild. Ref.	81	WLDF
MS	4	West Point	135	Waide, C.	82	WLDF
MS	6	Gulfport	133A	Laird, J.	82	WLDF
MS	5	Forest	135	McMurphy, H.	84	WLDF
MS	6	Raleigh	133A	Bailey, C.	84	WLDF

Aztec is considered better because it matures later and seeds are available longer into the winter for songbirds. Also it is slightly more vigorous. The rough-leaf plants are browsed reluctantly by deer if other food is unavailable. Establishment was often poor, either due to drought or poor seed quality. Although it may start slowly, it provides good cover for erosion control after the first year. It grows well on eroded blackland soils. Either variety is attractive and may be used as ornamentals where one would not object to their tallness.

'Haskell' Sideoats Grama (Bouteloua curtipendula, PI-433946)

This plant was released by the Knox City PMC in 1983. It was planted in field plantings in western Arkansas for roadside erosion control where its range of adaptation was not definitely known. 'El Reno' sideoats grama, a 1944 release from the Manhattan PMC, was used as a standard for comparison. While other field plantings were scheduled, only one field planting was made in 1982 and another in 1984. Field plantings were made at the following locations.

STATE	AREA	FIELD OFFICE	MLRA	COOPERATOR	YEAR	PURPOSE
AR	6	Hope	135	Webb, B.	82	CARD
AR	6	Nashville	135	Anderson, J.	84	CARD

Haskell is a better adapted variety to the area, but it probably would not perform better than bermudagrass or bahiagrass in similar situations. It apparently would be satisfactory in native grass mixtures for pasture.

'Ellagood' Autumn Olive (Elaeagnus umbellata, PI-421132)

This plant was released for wildlife use by the Americus (GA) PMC in cooperation with the Coffeeville PMC in 1986. Field plantings using 'Cardinal' as a standard were begun in 1980 and continued through 1986. Cardinal autumn olive was released for wildlife by the Elsberry PMC in 1961. Field plantings were made at the following locations.

STATE	AREA	FIELD OFFICE	MLRA	COOPERATOR	YEAR	PURPOSE
AR	3	Mena	119	Park, J.	80	WLDF
AR	1	Melbourne	116A	Herold, D.	81	WLDF
LA	2	Alexandria	133B	Camp Beauregard	80	WLDF
LA	2	Opelousas	131	Dubuisson, N.	80	WLDF
LA	3	Ville Platte	150	Lee, W.	80	WLDF
LA	3	New Orleans	131	Jefferson Parish	82	WLDF
LA	2	Denham Springs	134	Southern Univ.	82	WLDF
MS	4	Tupelo	133A	Waldrup, B.	80	WLDF
MS	7	Liberty	134	Carter, V.	80	WLDF
MS	4	Tupelo	135	Waldrup, B.	81	WLDF

Ellagood was considered superior for use in the South because it produces more seeds and they mature about a month later enabling birds to have food later into the winter when food is scarce.

TECHNICAL PAPERS IN 1986

Coffeeville Plant Materials Center. 1986. Technical Notes:

- No.1. Arkansas Blackland Prairie Field Evaluation Planting
 - I. Plant Performance in Management Trials (1983-1985).
- No.2. Arkansas Blackland Prairie Field Evaluation Planting
 - II. Changes in Plant Performance over Three Years (1983-1985).
- No.3. Rooting Trials for Promising Willows.
- No.4. Advanced Evaluation of Afghan Reedgrass:
 - I. Results of Planting Trials.
- No.5. Advanced Evaluation of Afghan Reedgrass:
 - II. Effect of Clipping on Production.

COFFEEVILLE PLANT MATERIALS CENTER
COFFEEVILLE, MISSISSIPPI

Report of Activities -- 1986

Including Field Activities in Arkansas, Louisiana, and Mississippi

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